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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,207	03/15/2004	Jiahn-Chang Wu	WU-9305	8555
7590	01/19/2006		EXAMINER	
Hung Chang Lin 8 Schindler Ct. Silver Spring, MD 20903			LE, KHANH H	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

3K

Office Action Summary	Application No. 10/800,207	Applicant(s) WU, JIAHN-CHANG	
	Examiner Khanh H. Le	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Wu (US Patent No 6,767,112).

3. With respect to claim 1, Wu discloses a light bulb (projection lamp) having at least one light emitting device (20), a cup (1) in which the light emitting device (20) is housed, and a metal grid (50), placed in the open end of the cup (1), serving as a radiator to dissipate the heat (Col. 5, lines 8-9) generated from the light emitting device (20) and as windows (271) for transmission of light (E1) emitted from the light emitting device (20).

4. With respect to claim 2, Wu discloses the light bulb as described in claim 1, wherein the metal grid (50) comprises a matrix of parallel horizontal plates (21) and

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parallel vertical walls (22), each having an outer surface facing the open end and an inner surface facing the light emitting device (20) (see Fig. 2 and Fig. 21).

5. With respect to claim 3, Wu discloses the light bulb having at least one light emitting device (20) placed on the inner surface of the metal grid (see Fig. 2, and Col. 1, lines 27-29).

6. With respect to claim 4, Wu discloses each one of the light emitting device (20) has two electrodes (Col 5, lines 11-12) connected to one of the parallel horizontal plates and one of the parallel vertical walls respectively (Col. 1, lines 31-32), and the horizontal plates and the vertical walls are insulated (23) from each other (see Fig. 21 and Col. 5, lines 12-15).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (US Patent No 6,767,112) in view of Zhang (US Patent No. 6,578,998).

9. With respect to Claim 5, Wu does not teach to back filled the cup with a transparent material selected from the group consisting of glass and transparent polymer composite.

Zhang teaches that using epoxy resin, which is a transparent polymer composite, in a light bulb (10) is a conventional way to strengthen the supporting frame (30) (Col 4, lines 5-7) of an LED light source (20) having a heat sink (31).

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to use epoxy resin, as taught by Zhang, to back-filled the cup of Wu, so that the epoxy resin can strengthen the metal grid in Wu's light bulb.

10. With respect to claim 6, Wu does not teach to place the light emitting device in the bottom of the light bulb.

Zhang teaches to place the LED light source at the focal point (a point that is close to the bottom end of the cup) of the reflective cavity to ensure proper light emitting (Col. 5, lines 11-13).

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to place the light emitting device of Wu at the bottom of the cup, as taught by Zhang, so that the light emitting device in Wu light bulb would emit light efficiently.

11. With respect to claim 7, Wu does not teach the use of a back-filled material.

Zhang discloses that the metal conductor (31) protrudes outside the resin material for increasing heat removal (see Fig. 1, and Col. 2, lines 57-67).

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to have the metal grid protrudes outside the back-filled material, as taught by Zhang, for increasing heat removal.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wu (US Patent No. 6,652,123) discloses an LED matrix panel having horizontal and vertical conductive bars for heat dissipation. Jacobson et al. (US Publication No. 2005/0168994) discloses a back reflecting LED light source having heat sink and a cup shaped reflector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh H. Le whose telephone number is (571) 272-8325. The examiner can normally be reached on Monday - Friday, 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on (571) 272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khanh H. Le
Examiner
Art Unit 2875

KHL



RENEE LUEBKE
PRIMARY EXAMINER